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Paul A. Kline

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CAPITAL LEGAL GROUP, LLC  
1100 River Bay Road  
Annapolis, MD 21409

EXAMINER

LI, SHI K

ART UNIT

PAPER NUMBER

2613

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/016,998

**Applicant(s)**

KLINE, PAUL A.

**Examiner**

Shi K. Li

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8,10,13-18,20-24,26-41,43-46,50-59 and 61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8,10,13-18,20-24,26-41,43-46,50-59 and 61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/18/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 20-24 and 26-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 20 recites the limitation “a router in communication with the fiber optic transceiver and the modem” in line 10 of the claim. Instant specification, as originally filed, does not describe the limitation in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. Claims 36-46 and 50-57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 36 recites the limitation “a router in communication with the fiber optic transceiver” in line 5 of the claim. Instant specification, as originally filed, does not describe the limitation in such a way as to reasonably convey to one skilled in the relevant art

that the inventor(s), at the time the application was filed, had possession of the claimed invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 37-41, 43-46 and 50-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 37 recites the limitation "The communication network of claim 36" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 40 recites the limitation "The communication network of claim 36" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 43 recites the limitation "The communication network of claim 36" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 45 recites the limitation "The communication network of claim 36" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.
10. Claim 50 recites the limitation "The communication network of claim 36" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.
11. Claim 52 recites the limitation "The communication network of claim 36" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.
12. Claim 54 recites the limitation "The communication network of claim 36" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 56 recites the limitation "The communication network of claim 36" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

15. Claims 1-2, 4-8, 10 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown1 (U.S. Patent 6,282,405 B1) in view of Brown2 (U.S. Patent 5,949,327).

Regarding claim 1, Brown1 teaches in FIG. 13 a hybrid communication network comprising power line network 132 which is coupled to a telecommunication network 130 via coaxial/fiber interface unit 138. The hybrid communication network allows data to be transmitted between the power line network and a fiber network. Brown1 teaches in FIG. 2 transceiver/modem between the network conditioning unit (corresponding to 136 of FIG. 13) and the optical network. Application argues, "In fact, the text of Brown does not mention or include the word "modem" or "transceiver". It is true that the text of Brown1 does not mention or include the word "modem" or "transceiver". However, Brown2, granted to the same inventor, teaches in FIG. 12 transceiver 1202 and modem 1204. In fact, Brown2 teach in col. 2, lines 45-49 transmitter/receiver unit 1203 and modem unit 1204. One of ordinary skill in the art would have been motivated to combine the teaching of Brown2 with the hybrid network of Brown1 because Brown2 simply supplements what Brown1 would have considered obvious and, therefore, have been omitted. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a transceiver/modem for convert data signal form one format to another, as taught by Brown2, in the hybrid network of Brown1. Furthermore,

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Brown2 teaches in col. 5, lines 1-10 that for overcoming the problem of coupling HF communications signals across transformers at various voltage levels, a HF by-pass unit is preferable provided.

Regarding claims 2 and 5-6, Brown1 teaches coaxial/fiber interface unit 138.

Regarding claim 4, Brown1 teaches in col. 7, lines 10 radio frequency of 1 MHz.

Regarding claim 7-8 and 18, Brown1 teaches in FIG. 13 electric power system.

Regarding claim 10, Brown1 teaches in col. 3, lines 67 low-voltage network of 240 V.

Regarding claim 13, Brown1 teaches in col. 3, lines 67 high-voltage network of 132 KV.

Regarding claim 14, Brown1 teaches in FIG. 13 telecommunications signals 146.

Regarding claim 15, Brown1 teaches in FIG. 13 unit 144.

Regarding claim 16, Brown1 suggests in col. 1, lines 40 that telecommunication signals are used for providing telephone services.

Regarding claim 17, Brown2 teaches in FIG. 14 coaxial cable 1401.

16. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown1 and Brown2 as applied to claims 1-2, 4-8, 10 and 13-18 above, and further in view of Feldman et al. (U.S. Patent 6,577,414 B1).

Brown1 and Brown2 have been discussed above in regard to claims 1-2, 4-8, 10 and 13-18. The difference between Brown1 and Brown2 and the claimed invention is that Brown1 and Brown2 do not teach Synchronous Optical Network (SONET). However, SONET is well known in the art for transporting optical signals. For example, Feldman et al. teaches in FIG. 2 SONET equipment 218 and 233. One of ordinary skill in the art would have been motivated to combine the teaching of Feldman et al. with the modified hybrid communication network of Brown1 and

Brown2 because SONET has become an industrial standard (it is equivalent to the international standard SDH) and is widely used for transporting optical signals in the North America. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use SONET for the optical signals, as taught by Feldman et al., in the modified hybrid communication network of Brown1 and Brown2 because SONET has become an industrial standard and is widely used for transporting optical signals in the North America.

17. Claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown1 (U.S. Patent 6,282,405 B1) in view of Dhara et al. (U.S. Patent 7,203,185 B1).

Regarding claims 20, 36, 58-59 and 61, Brown1 teaches in FIG. 13 a hybrid communication network comprising power line network 132 which is coupled to a telecommunication network 130 via coaxial/fiber interface unit 138. The hybrid communication network allows data to be transmitted between the power line network and a fiber network. Brown1 teaches in FIG. 2 transceiver/modem between the network conditioning unit (corresponding to 136 of FIG. 13) and the optical network. Application argues, "In fact, the text of Brown does not mention or include the word "modem" or "transceiver". It is true that the text of Brown1 does not mention or include the word "modem" or "transceiver". However, it is understood that to interface an optical network and an electrical network, it is necessary to convert between optical and electrical signal using a transceiver and a modem for converting signal between baseband and RF using a modem. For example, Dhara et al. teaches in FIG. 1 headend unit for interfacing between an electrical network 132 or 134 and an optical network (optical node 118). Headend unit comprises optical Tx/Rx, modem 120 and router 124. One of

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ordinary skill in the art would have combined the teaching of Dhara et al. with the hybrid communication network of Brown1 because the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use optical transceiver for converting between optical and electrical signal and use a modem for converting signal between baseband and RF, as taught by Dhara et al., in the hybrid communication network of Brown1.

Regarding claim 21, it is understood that an optical transceiver converts optical signal to electrical signal.

Regarding claims 22-23 and 27, it is understood that modem stands for modulator/demodulator and modulates/demodulates signal with a carrier.

Regarding claim 24 and 28, it is understood that optical transceiver converts electrical signal to optical signal.

Regarding claims 29-30, 50 and 52, Brown1 teaches in col. 3, lines 67 low-voltage network of 240 V. Brown1 teaches in FIG. 1 buildings 48.

Regarding claim 31 and 54-55, Brown1 teaches in col. 3, lines 67, medium-voltages between 132 KV and 240 V.

Regarding claim 32 and 56-57, Brown1 teaches in col. 3, lines 67 high-voltage network of 132 KV.

Regarding claim 33, Brown1 teaches in FIG. 13 device 144 for coupling to telecommunications signals 146.



Regarding claim 34, Brown1 suggests in col. 1, lines 40 that telecommunication signals are used for providing telephone services.

Regarding claim 37, Brown1 teaches in FIG. 13 interface device 136 for connecting to the power system and interface device 144 for connecting to telecommunication signals.

Regarding claim 38, Browns teaches in FIG. 1 buildings 48.

Regarding claim 39, Brown1 suggests in col. 1, lines 40 that telecommunication signals are used for providing telephone services.

Regarding claim 43, Dhara et al. teaches in FIG. 1 router 146 and CPBTG 142 that communicate with the modem.

Regarding claim 44, a router is a computing device.

Regarding claim 45, Brown1 teaches in FIG. 1 transformer 44.

18. Claims 26, 35, 40 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown1 and Dhara et al. as applied to claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61 above, and further in view of and Perkins (U.S. Patent 4,433,284) and Brown2 (U.S. Patent 5,949,327).

Brown1 and Dhara et al. have been discussed above in regard to claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61. Regarding claims 26, 40 and 46, the difference between Brown1 and Dhara et al. and the claimed invention is that Brown1 and Dhara et al. do not teach a transformer bypass device. Transformer bypass devices are well known in the art. For example, Perkins teaches in FIG. 1 a transformer bypass device. Brown2 teach Brown2 teaches in col. 5, lines 1-10 that for overcoming the problem of coupling HF communications signals across transformers at various voltage levels, a HF by-pass unit is preferable provided. One of ordinary

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skill in the art would have been motivated to combine the teaching of Perkins and Brown2 with the modified hybrid communication network of Brown1 and Dhara et al. because a transformer bypass device couples communication signal across a transformer. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a transformer bypass device, as taught by Perkins and Brown2, in the modified hybrid communication network of Brown1 and Dhara et al. because a transformer bypass device couples communication signal across a transformer.

Regarding claim 35, Brown2 teaches in FIG. 14 coaxial cable 1401.

19. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown1 and Dhara et al. as applied to claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61 above, and further in view of Feldman et al. (U.S. Patent 6,577,414 B1).

Brown1 and Dhara et al. have been discussed above in regard to claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61. The difference between Brown1 and Dhara et al. and the claimed invention is that Brown1 and Dhara et al. do not teach Synchronous Optical Network (SONET). However, SONET is well known in the art for transporting optical signals. For example, Feldman et al. teaches in FIG. 2 SONET equipment 218 and 233. One of ordinary skill in the art would have been motivated to combine the teaching of Feldman et al. with the modified hybrid communication network of Brown1 and Dhara et al. because SONET has become an industrial standard (it is equivalent to the international standard SDH) and is widely used for transporting optical signals in the North America. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use SONET for the optical signals, as taught by Feldman et al., in the modified hybrid communication network of Brown1

and Dhara et al. because SONET has become an industrial standard and is widely used for transporting optical signals in the North America.

20. Claims 51 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown1 and Dhara et al. as applied to claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61 above, and further in view of Lehr et al. (U.S. Patent 6,643,566 B1).

Brown1 and Dhara et al. have been discussed above in regard to claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61. The difference between Brown1 and Dhara et al. and the claimed invention is that Brown1 and Dhara et al. do not teach routing signal to various low-voltage network. Lehr et al. teaches in FIG. 2A a network for routing signals to various telephones and computers via router 66. These telephones and computers are likely to be in different houses. One of ordinary skill in the art would have been motivated to combine the teaching of Lehr et al. with the modified hybrid communication network of Brown1 and Dhara et al. because a router only routes traffic specific to a destination towards the destination and reduces traffic toward the destination and keeps data privacy. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to route traffic specific to a destination toward the destination, as taught by Lehr et al., in the modified hybrid communication network of Brown1 and Dhara et al.

### ***Response to Arguments***

21. Applicant's arguments with respect to claims 1-8, 10, 13-18, 20-24, 26-41, 43-46, 50-59 and 61 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (7:30 a.m. - 4:30 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl  
21 November 2008

/Shi K. Li/  
Primary Examiner, Art Unit 2613